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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,138	12/03/2003	George A. Provost	05918-346001	2304
26161	7590	12/13/2005	EXAMINER	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			AFTERGUT, JEFF H	
			ART UNIT	PAPER NUMBER
			1733	
DATE MAILED: 12/13/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/728,138	Applicant(s) PROVOST ET AL.	
	Examiner Jeff H. Aftergut	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2005.  
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.  
 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) See Continuation Sheet is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: _____  |

Continuation of Disposition of Claims: Claims pending in the application are 1,2,4,6,9,10,15,16,22-25,29,31-33,45,46,49,54-58,60-63,65-67,70,77-82,87-93,97,99-101,110-115,117,122-126,128,130-144,209-219 and 3543.

Continuation of Disposition of Claims: Claims withdrawn from consideration are 23, 24, 35, 40-43, 45, 56, 57, 61-67, 70, 77-79, 125, 126, 128, 130, 133, 135-137, 139, 140, 210.

Continuation of Disposition of Claims: Claims rejected are 1,2,4,6,9,10,15,16,22,25,29,31-33,36-39,49,54,55,58,60,80-82,87-93,97,99-101,110-115,117,122-124,131,132,134,138,141-144,209 and 211-219.

***Election/Restrictions***

1. Applicant's election of Group I, the species of the use of fibers as the binder and the species of applying the fibers in an uneven pattern to produce the patterned product, claims 1, 2, 4, 6, 9, 10, 15, 16, 22, 25, 29, 31-33, 36-39, 46, 49, 54, 55, 58, 60, 80-82, 87-93, 97, 99-101, 110-115, 117, 122-124, 131-132, 134, 138, 141-144, 209 and 211-219 in the reply filed on 10-31-05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 23-24, 35, 40-43, 45, 56, 57, 61-67, 70, 77-79, 125, 126, 128, 130, 133, 135-137, 139, 140 and 210 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10-31-05.
3. It should be noted that this election was clarified as to which claims read on the identified species in a telephone conversation with Sean Dean on 12-7-05 wherein applicant noted that several of the previously identified claims did not read on the species of using a fiber as the binder material.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

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said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4, 6, 10, 15, 16, 22, 25, 29, 31-33, 36-39, 46, 49, 54, 55, 58, 60, 80-82, 87-93, 97, 99-101, 134, 138, 141-144 and 214-219 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT WO 01/80680 in view of either one of Japanese Patent 9-317 or Japanese Patent 7-171011.

PCT '680 (note that E.P. 1,279,348 is the English equivalent for PCT '680) taught the steps of applying a fibrous layer upon a nonwoven carrier layer. Following the assembly of the layers together, the reference taught that one skilled in the art would have needled loops through the fibrous layer and the carrier onto the opposite side of the carrier whereby the fibers extended to form loops and whereby the finished assembly was suitable for a female member of a hook and loop fastener component (the loop component of the same). The reference suggested the use of fibers which included core and sheath type fibers to facilitate heat bonding. Additionally, the reference taught that the same would have been heat bonded in the finished assembly. The reference taught that the nonwoven fabric carrier had a thickness not more than 0.016 inches in thickness. The reference taught that the dtex of the filaments which formed the loop material was 1-15 dtex. The reference suggested that the weight of the nonwoven carrier was between 10-130 grams per square meter. The reference taught that the loops would have been formed via a needle punching operation and that the punching density was selected freely depending upon the kind of punching needles to be used and the needle depth in punching. The reference taught that the preferred density was between 20-100 times per square

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centimeter. The reference failed to teach the use of at least 200 timers per square centimeter for the punching density.

The references to either one of Japanese Patent '317 or '011 suggested that those versed in the art would have understood that in the manufacture of a female component of a hook and loop fastener it was known at the time the invention was made to provide a needling density of between 20-300 was known per se in the art as a suitable density for needle punching in order to push the fibers through the base substrate and expose loops on the opposite side. More specifically, applicant is referred to paragraph [0011] of Japanese Patent '317 and paragraph [0008] of Japanese Patent '011. As the reference to PCT '680 suggested that one skilled in the art would have selected the needle punching density freely, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select a density of between 20-300 punches per square centimeter as suggested by either one of Japanese Patent 7-171011 or Japanese Patent 9-317.

With regard to the various dependent claims, the applicant is advised that the fibrous material suggested by the references were inclusive of those materials identified in the claims. Additionally, the applicant is advised that those skilled in the art would have provided a needle board and needles which were suitable for forming the looped material and such would have included the conventional needling devices as claimed. It should also be pointed out that the references suggested that one skilled in the art would have bound the layers together with a pressing roll arrangement wherein the fibers would have been

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melted in the operation and that patterning in such a bonding operation was known. Additionally, application of the loops where desired in the finished assembly would have been within the purview of the ordinary artisan. Note that the inclusion of printing on the carrier sheet would have been within the purview of the ordinary artisan and is a function of the type of product being manufactured and such is taken as conventional in the art. Additionally the use of stretchable nonwoven materials is taken as conventional in the art as a function of the desirability of being able to stretch the finished fastener component and one skilled in the art would have known how to use the same in the processing.

6. Claims 2, 9, 58 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 5 further taken with German Patent 3006805.

The references as set forth above in paragraph 5 suggested that the carrier layer would have been a fibrous carrier layer. As claimed in claims 2 and 9, the carrier layer is required to be in the form of a film of material. The reference to German Patent '805 suggested that those skilled in the art would have incorporated a film of material adjacent a fibrous layer prior to needle punching the same in the formation of a tufted product wherein loops are formed on the opposite side of the finished assembly. The reference to German Patent '805 expressly stated that the use of the film in the needle punching operation to form the looped product resulted in improved dimensional stability of the fabric as well as check valve action on the needled fibers, prevention of the fibers from being drawn back when the needle reverses its motion and a considerable

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increase in pile density (number of loops on the surface). Because of these various advantages, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a film material for the carrier in the process of making a looped pile for a female component of a fastener as such had the specified advantages identified by German Patent 3006805 in the process of making the female component of the hook and loop fastener as set forth above in paragraph 5.

With respect to claims 58 and 60, note that the specified material (the films) would have cracked as a function of the needles penetrating the films during the processing and thus would have provided the specified operation as defined in these claims.

7. Claims 110, 112-115, 117, 122-124, 131, 132, 209-213 are rejected under 35 U.S.C. 103(a) as being unpatentable over PCT WO 01/80680 in view of German Patent 3006805.

PCT '680 suggested that those skilled in the art would have formed a looped material for a hook and loop fastener in a like manner to that claimed and suggested that fibers would have been forced through a carrier onto the opposite side in order to form the loops therein. Applicant is referred to paragraph 5 above for a complete discussion of the reference. The reference failed to teach that those skilled in the art at the time the invention was made would have incorporated a film material for the carrier in the processing. However, the use of a film carrier into which one needle punched to form the assembly was known as evidenced by German Patent '805. The reference to German Patent '805

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suggested that those skilled in the art would have incorporated a film of material adjacent a fibrous layer prior to needle punching the same in the formation of a tufted product wherein loops are formed on the opposite side of the finished assembly. The reference to German Patent '805 expressly stated that the use of the film in the needle punching operation to form the looped product resulted in improved dimensional stability of the fabric as well as check valve action on the needled fibers, prevention of the fibers from being drawn back when the needle reverses its motion and a considerable increase in pile density (number of loops on the surface). Because of these various advantages, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a film material for the carrier in the process of making a looped pile for a female component of a fastener as such had the specified advantages identified by German Patent 3006805 in the process of making the female component of the hook and loop fastener as taught by PCT WO 01/80680.

8. Claim 111 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 7 further taken with either one of Japanese Patent 9-317 or Japanese Patent 7-171011.

The references as set forth above in paragraph 7 suggested the overall operation of needling wherein one needled filaments through a plastic film carrier web in order to form a female component of a loop and hook fastener, however there is no indication that the artisan would have provided the needle density as recited in the claim as the reference to PCT '680 suggested a density of needles between 20-100 needles per square centimeter.

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The references to either one of Japanese Patent '317 or '011 suggested that those versed in the art would have understood that in the manufacture of a female component of a hook and loop fastener it was known at the time the invention was made to provide a needling density of between 20-300 was known per se in the art as a suitable density for needle punching in order to push the fibers through the base substrate and expose loops on the opposite side. More specifically, applicant is referred to paragraph [0011] of Japanese Patent '317 and paragraph [0008] of Japanese Patent '011. As the reference to PCT '680 suggested that one skilled in the art would have selected the needle punching density freely, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select a density of between 20-300 punches per square centimeter as suggested by either one of Japanese Patent 7-171011 or Japanese Patent 9-317 in the process for forming a female component for a hook and loop fastener as taught above in paragraph 7.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Jeff H. Aftergut  
Primary Examiner  
Art Unit 1733

JHA  
December 7, 2005